

WHAT IS CLAIMED IS:

1. A substrate having a hydrophobic surface coating comprised of a silicon oxide anchor layer, and a hydrophobic layer which covers the cross-link layer and which consists essentially of the humidified simultaneous vapor deposited reaction product of methyltrichlorosilane (MTCS) and dimethyldichlorosilane (DMDCS).
2. The substrate of claim 1, further comprising a cross-linking layer which is interposed between the anchor layer and the hydrophobic layer, and which consists essentially of the humidified vapor-deposited reaction product of MTCS..
3. The substrate of claim 1 or 2, further comprising a capping layer which covers the hydrophobic layer and which consists essentially of the humidified vapor deposited reaction product of trimethylchlorosilane (TMCS).
4. The substrate of claim 2, wherein the humidified vapor-deposited reaction product of MTCS consists essentially of polymethylsilsesquioxane (PMSO), and wherein the humidified simultaneous vapor deposited reaction product of MTCS and DMDCS is cross-linked polydimethylsiloxane (PMDSO).
5. The substrate of claim 1, wherein the anchor layer exhibits a haze value of less than about 3.0%.

6. The substrate of claim 5, wherein the anchor layer exhibits a haze value of less than about 2.0%.

7. The substrate of claim 6, wherein the anchor layer exhibits a haze value of less than about 1.5%.

8. The substrate of claim 2, wherein the volume ratio of MTCS to DMDCS in the hydrophobic layer is between about 0.15 : 1 to about 1.75 :1...

9. The substrate of claim 8, wherein the volume ratio of MTCS to DMDCS in the hydrophobic layer is between about 0.75 : 1 to about 1.25 : 1.

10. A process for forming a hydrophobic coating on a glass substrate comprising the steps of:

- (a) contacting a surface of the substrate to be coated with a silicon tetrachloride vapor for a time sufficient to form a silicon oxide layer on the glass surface; and then
- (b) simultaneously contacting the silicon oxide layer with vapors of methyltrichlorosilane (MTCS) and dimethyldichlorosilane (DMDCS) for a time sufficient to form a cross-linked layer of polydimethylsiloxane (PDMSO).

11. The process of claim 10, wherein the volume ratio of MTCS to DMDCS is between about 0.15 : 1 to about 1.75 :1...

12. The process of claim 11, wherein the volume ratio of MTCS to DMDCS is between about 0.75 : 1 to about 1.25 : 1.

13. The process of claim 10, which further comprises between steps (a) and (b), the step of (c) interposing a cross-linking layer between said anchor layer and said hydrophobic layer by the humidified vapor deposition of MTCS.

14. The process of claim 10, which further comprising the step of vapor depositing a fluoroalkylsilane capping layer over the hydrophobic layer.

15. The process of claim 14, wherein the fluoroalkylsilane capping layer consists essentially of trimethylchlorosilane (TMCS).

16. A coated glass substrate made by the process of any one of claims 10-15.